



Forging new generations of engineers

the sharp edge



PLTW Goes International

PLTW is bringing better engineering education to the world—beginning with Britain.

St. Benedict Catholic School and Performing Arts College in Derby, England, is the first school outside of the United States to join the PLTW network. A pilot class of 12 to 19 high school students starts the PLTW curriculum this fall.

“PLTW looks at this as an opportunity to expand our network and have a greater reach,” says Niel Tebbano, PLTW Director of Operations. School curriculum in the United Kingdom is national, so both PLTW and St. Benedict foresee expanding the program to the rest of the country.

“England, like America, suffers from a lack of talented, qualified engineers,” says Peter Thraves, Assistant Headteacher at St. Benedict. “Our school is using different ways to help

students reach their maximum potential. We teach them how to think outside of the box to achieve their goals.”

Last year, St. Benedict Headteacher Christopher Reynolds heard about PLTW while visiting Indianapolis, where PLTW partners with Rolls-Royce and the Indiana State Department of Education to offer internships for students and teachers at Rolls-Royce’s jet engine factory. Rolls-Royce also has a plant in Derby.

“Derby is an engineering city,” says Thraves. “We have companies such as Rolls-Royce, Toyota, Bombardier, and others in the area. We see projects like this as one way of trying to increase interest in science and engineering in our city.”

St. Benedict will launch its first set of PLTW courses to 13-, 14-, and 16-year-olds in September. The school is still deciding exactly which PLTW classes to offer. The program will be



Students at St. Benedict Catholic School and Performing Arts College in Derby, England, start PLTW classes this fall.

reviewed and evaluated in 2006, with the goal of bringing PLTW to other schools in the UK.

Visit St. Benedict Catholic School and Performing Arts College on the Internet at www.saintben.derby.sch.uk.

■ P L T W I N A C T I O N

Congress Learns about PLTW

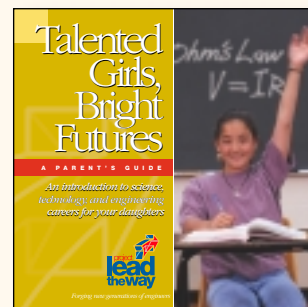
PLTW’s new booklet—*Talented Girls, Bright Futures*—circulated through the halls of Congress in December.

Congresswoman Nita Lowey of the 18th District of New York and Congressman John Sweeney of New York’s 20th District distributed copies of the booklet to all of their colleagues in the House of Representatives, along with a letter introducing PLTW.

The letter points out that, “PLTW is working!...PLTW has

increased the quantity and quality of engineers and engineering technologists graduating from our educational system....PLTW is the kind of innovative, forward thinking, promising program that we all need to learn about, promote, and support in our public schools.”

To read the letter to Congress, visit www.pltw.org/bulletins.shtml.



Washington Partnership Excels

Thanks to a unique partnership among legislators, two- and four-year colleges, K-12 schools, and business and industry, PLTW in Washington state is booming. In November 2003, the state was home to only three PLTW schools, but it now boasts 12 schools in 11 districts.

"It's been fun up here," says Richard Gartrell, Executive Dean of Corporate Training Connection at South Seattle Community College. "The PLTW curriculum is so solid. Our colleges see the value in students that have gone through the program."

Gartrell says the relationship between the 165-member Washington State Coalition for Engineering Education (WASCEE) and PLTW has become a model for other states. Among the group's accomplishments is the diversity in PLTW programs in western Washington. For example, 28 of the 48 PLTW students at Mountlake Terrace High School are females and/or minority members.

WASCEE's director, Nancy Verheyden, is Washington's State Director, making Washington the only PLTW state in the network in which the state leader is not with the state department of education.

To find out more about PLTW affiliates and for information on regional partnerships, visit www.pltw.org/affprogram.shtml.

The Director's Corner

By Richard Blais

Assessing K-12 Engineering Programs

As schools throughout the nation add more engineering and engineering technology programs such as PLTW, they face some critical questions: What makes a great program? By what criteria should one compare competing programs? How does one know that a program meets high standards?

PLTW is providing some answers. We have created a tool called "Criteria for Evaluating K-12 Programs in Engineering and Engineering Technology." It offers 20 factors by which a program should be judged, including "Real World Projects and Problems," "Assessment," and "School Counselor Training and Support."

The tool features a zero-to-three point scale for measuring how well a program stacks up in each area. The "Vision and Goals" criterion, for example, scores a program using the following scale:

Three points: "Offers a strategic plan that clearly defines the mission and measurable goals of the program."



Richard Blais

Stacey Lauren

Two points: "A strategic plan is stated that defines the mission. Goals are listed but are not measurable."

One point: "States a general mission. No goals are provided."

Zero points: "Has no mission statement."

By assessing a program on a scale of zero to 60 points, a school can identify areas of excellence and

those that need improvement. And, if a school is considering competing programs, it can compare and score them objectively.

We believe that "Criteria for Evaluating K-12 Programs in Engineering and Engineering Technology" is an excellent starting point for analysis and discussion, as it brings objectivity and a common language to the decision-making process. The tool is now available on the PLTW website at www.pltw.org/EOP_K12_Overview.shtml. I invite you to try the tool to judge how well your K-12 engineering and engineering technology programs measure up.

■ BULLETIN BOARD

Report From Directors and Affiliates Meeting

About 100 people attended PLTW's annual State Leader and Affiliate Director Summit in Las Vegas, Nevada, in December.

George Rogers, the Association for Career and Technical Education's new

President, welcomed attendees. He was followed by Dr. Norman Fortenberry of the National Academy of Engineering's Center for the Advancement of Scholarship on Engineering Education (CASEE), who delivered the keynote

address, which was entitled, "Leading the Way in Research-Based Educational Practice."

Although the two-day conference provided plenty of time for networking with colleagues, participants were also

(Continued on Page 4)

Florida Colleges Create Pathway to Engineering Degree

Two Florida colleges have teamed up to create a clear pathway for PLTW students to follow from high school, through postsecondary education, and into engineering careers.

In December, Miami Dade College (MDC) and the University of South Florida (USF) signed a matriculation agreement, under which a PLTW student from a participating high school can complete two years of general and engineering course work at MDC in Miami, then transfer to USF in Tampa to finish a bachelor's degree in engineering.

MDC and USF hope their partnership will encourage students to pursue higher education. The colleges will coordinate with the Miami Dade School District as well as area private schools to publicize the program to students and parents.

"PLTW arms middle school and high school students with the skill set for critical thinking and problem solving," says Eva

"In Florida, PLTW has the opportunity to have a real effect on the Latino and female presence in the engineering community."

—Eva Fernandez

Fernandez, Director of Engineering Student Services for USF's College of Engineering Recruitment and Retention. "Students are getting the fundamental principles of engineering at a younger age than they used to. That helps us with retention."

Bringing MDC on board should also help USF attract a more diverse engineering student population. "The field of engineering could really use more females and more minorities," says Fernandez.

The USF College of Engineering is PLTW's affiliate university in Florida. MDC will help to recruit Miami Dade teachers to USF's Summer Training Institute.

There are 31 PLTW middle schools and high schools in Florida. The Tampa area has nine PLTW schools, more than any other area in the state, while the Miami Dade area only has one. Both MDC and USF would like to see their partnership result in more Florida high schools joining the PLTW network.



From left to right: Eva Fernandez, Engineering Student Services, Recruitment and Retention, USF College of Engineering; Dr. Lourdes Oroza, Dean of Academic Affairs, MDC Wolfson Campus; and Carolyn Helm, PLTW Regional Director.

STUDENT SPOTLIGHT

Gavin Shelton

Gavin Shelton understands first-hand how important it is for people with disabilities to have access to assistive technologies that help them to live independently.

In December 2003, the PLTW student was left paralyzed by a near-fatal indoor rock climbing accident. During four months at the Shepherd Center, a catastrophic care hospital in Atlanta, the now high school senior from Isle of Palms, South Carolina, had to relearn everything from the most basic motor skills to the ability to walk.

Shelton began taking PLTW classes

four years ago, when the program came to Wando High School. He was one of the first PLTW honor students at the school in Mt. Pleasant, South Carolina.

"My PLTW classes helped me learn how you can be creative with technology and the way you apply it," Shelton says. "And although my accident closed a lot of doors, it also opened new ones. It brought out more of my creativity because I had to teach myself new ways to do everything."

Shelton plans to put his PLTW education to work in a career developing technology tools that improve the lives of the disabled.



"I want to be able to help kids who have gone through what I have."

—Gavin Shelton

(pictured with PLTW teacher David Roemer)

Meeting

(Continued from Page 2)

treated to presentations that included a demonstration of the new web-based Virtual Academy for Professional Development. Washington Partners President Ellin Nolan updated attendees on the strategies of PLTW's lobbyists in Washington, D.C., Steven Friedlander of Laine Communications presented PLTW's marketing initiatives, and Douglas Walcerz of True Outcomes reviewed initial results from the PLTW program evaluation.

PLTW Executive Director Dick Blais presented this year's Educator of the Year Award to B. T. Martin from the South Carolina Department of Education. Judith Cara, Community Relations Manager, accepted the Patriot's Award for Intel Corporation.



B. T. Martin (at left) of the South Carolina Department of Education accepted the PLTW Educator of the Year Award from PLTW Executive Director Dick Blais at the annual State Leader and Affiliate Director meeting in Las Vegas.



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